

Daily GLOWBUGS

Digest: V1 #23

via AB4EL Web Digests @ SunSITE

Purpose: building and operating vacuum tube-based QRP rigs

[AB4EL Ham Radio Homepage @ SunSITE](#)

%%%% GlowBugs %%%% GlowBugs %%%% GlowBugs %%%% GlowBugs %%%%

Subject: glowbugs V1 #23

glowbugs

Sunday, May 4 1997

Volume 01 : Number 023

Date: Sat, 3 May 1997 21:24:27 +0000

From: "Brian Carling (Radio G3XLQ / AF4K)" <bry@mnsinc.com>

Subject: Re: Hey Gang!

Hey there Matt! Great to see you on Glowbugs! You will love this group of old - - r - s !!

We would love to help you get that 6L6 rig going.

On 3 May 97 at 12:46, Carol N. Wright spoke about Hey Gang! and said:

> Hey Gang,
> I'm new to this list and the tube type gear. I've gotten a hold of
> two 6L6 tubes and plan to make a transmitter out of it. I have
> someone sending me some schematics and I'll try to get the other
> necessary parts up and get this tube transmitter built.
>
> My age is 16 years old and I've been a ham for almost 3 years. I'm
> into QRP, homebrewing, DX, CW 70% of the time. So these are my
> interests in Amateur Radio.
>
> So I hope that I can find a spot on this list. I've only had one
> piece of tube type gear and loved it. It was a Hallicrafters S-108
> rcvr which I hate to say that I don't have it any more. Best 72/73
> DE Matt, AE4JM
>
>
>

*** 73 from Radio AF4K / G3XLQ in Gaithersburg, MD USA *
** E-mail to: bry@mnsinc.com *
*** See the great ham radio resources at: *
** http://www.mnsinc.com/bry/ *

Date: Sat, 3 May 1997 21:24:27 +0000
From: "Brian Carling (Radio G3XLQ / AF4K)" <bry@mnsinc.com>
Subject: Re: Orphan 6GW8 Glowbug

Eric, I am JEALOUS!!

It is delightful to know that someone from our original group of 15 or so has actually got one of these going. I have RECENTLY acquired some 6GW8 tubes and a couple of 6BM8s which are good too.

I will begin construction soon and we can compare notes.

Let me know what voltage you are going to put on the 6GW8. Let's see..... if you use 350V for the B+ and get 50 mA of plate current in the final, that would be 17.5 watts input and about 12 watts out to the antler. Not bad for a little 9 pin tube!

72.5 de AF4K

On 3 May 97 at 2:26, EricNess@aol.com spoke about Orphan 6GW8 Glowbug and said:

> List members may remember my story about finding a poor neglected
> one tube transmitter at a recent ham swap. Due to the poor parts
> layout and the fact that the chassis didn't fit into the box, I
> decided to rebuild the transmitter using the original parts. Thanks
> to the assistance of many list members, I received the pin out of
> the tube and was able to trace out the schematic. At the same time
> I punched out a new front panel and chassis.
>
> I was wondering whether to rebuild the same circuit or build a
> proven design using the same tube. I was searching the web pages of
> list member Brian Carling, AF4K (a book mark for Brian's pages are a
> must for Glowbug fans) for a proven design using the 6GW8 and I
> stumbled upon "The Mighty Midget" from the February 1966 QST. Upon
> closer examination, realized my transmitter was a realization of the
> same circuit. No need to look for a proven circuit, I already have
> one. I do plan to add a few improvements like a fuse, power lamp,
> plate current meter, and a neon RF indicator.
>
> This weekend I will paint the front panel and plan the final holes
> in the chassis. Wiring will begin as soon as the paint dries. The
> paint can says I have to wait AT LEAST 48 hours for the paint to
> harden. I can't stand it.
> Fortunately there are two electronic swaps so the weekend will not
> be a
> total waste. HI HI
>
> 73, Eric WD6DGX
>
>
>

*** 73 from Radio AF4K / G3XLQ in Gaithersburg, MD USA *
** E-mail to: bry@mnsinc.com *
*** See the great ham radio resources at: *
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Date: Sat, 3 May 1997 22:08:03 -0400 (EDT)
From: "Walter L. Marshall" <wmarshall@CapAccess.org>
Subject: hetrodyne reciever

Dear Brewmeisters,

I saw this thing in a book (I think from the Xtal Society.) The oscillator for the crystal radio is a spark. Tuned with a cap and coil and injected to make the direct conversion. The version I saw described, must have radiated a lot from the antenna.

Anyone ever hear of anything like this?

Walter

Date: Sat, 03 May 1997 21:13:24 -0500
From: "Robert M. Bratcher Jr." <bratcher@worldnet.att.net>
Subject: Re: Hey Gang!

At 05:46 PM 5/3/97 +0000, you wrote:

>Hey Gang,

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>6L6 tubes and plan to make a transmitter out of it. I have someone
>sending me some schematics and I'll try to get the other necessary parts
>up and get this tube transmitter built.

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>My age is 16 years old and I've been a ham for almost 3 years. I'm into
>QRP, homebrewing, DX, CW 70% of the time. So these are my interests in
>Amateur Radio.

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>So I hope that I can find a spot on this list. I've only had one piece of
>tube type gear and loved it. It was a Hallicrafters S-108 rcvr which I
>hate to say that I don't have it any more. Best 72/73 DE Matt, AE4JM

Welcome!

I'm 38 now, got into ham radio when I was 12 years old.

First setup was an ART-13 with a Collins 75A-2 reciever.

Loved tubes ever since. More tube recievers followed plus of course transmitters.

At 16 I aquired a Collins KWS-1 then 2 years later the KW-1. (hams I knew passed away) Do I love all my boatanchors? Oh Yes!!!

Robert M. Bratcher Jr.

E-mail to:

bratcher@worldnet.att.net

Record collector, 8mm, super 8, 16 and 35mm Film collector.

I like old radio's too.

Collins, Hallicrafters, National & Hammurland are my Favorites!

Date: Sat, 3 May 1997 22:55:45 -0500 (CDT)
From: Bob Roehrig <broehrig@admin.aurora.edu>
Subject: 1st BA FMT announcement

The first BA FMT (Frequency Measuring Test) will take place the evening of May 21, 1997 at 1900 CST. That's May 22 at 0000Z. Transmissions will take place on the 80, 40, and 20 meter bands with the following schedule:

1st RUN will start at 0000Z:

80 meters:	Transmitter tuneup	(period 1)	0000-0005Z
	Equipment checkout	(period 2)	0005-0010Z
	ACTUAL TEST PERIOD	(period 3)	0010-0015Z
40 meters:	Transmitter tuneup	(period 1)	0015-0020Z
	Equipment checkout	(period 2)	0020-0025Z
	ACTUAL TEST PERIOD	(period 3)	0025-0030Z
20 meters:	Transmitter tuneup	(period 1)	0030-0035Z
	Equipment checkout	(period 2)	0035-0040Z
	ACTUAL TEST PERIOD	(period 3)	0040-0045Z

2nd RUN will start at 0200Z and will follow the same schedule as above.

TRANSMISSION FORMAT (Similar to shown below):

During period 2, transmission will be 13WPM CW:

VVV DE K9EUI FMT TO FOLLOW
5 seconds of steady carrier
repeat for 5 minutes

During period 3, transmission will be 13WPM CW:

QST QST QST DE K9EUI WITH FMT TO FOLLOW NOW

20 seconds steady carrier
VVV DE K9EUI FMT
repeat for 5 minutes

VVV DE K9EUI END OF FMT 73 SK

////////////////////////////////// RULES ////////////////////////////////////

Transmissions will be near 3600, 7175, and 14060 kHz plus or minus 5 kHz. Transmissions in periods 1 and 2 not guaranteed to be on final frequency (but close). Only the period 3 frequency counts (see #4 below).

1. All equipment used in the reception, calibration, and measurement of the FMT must be tube type equipment. No solid state gear can be used.
2. Logs must be submitted to K9EUI via E-mail to: broehrig@admin.aurora.edu and received by me no later than 0000Z Thurs May 29, 1997.
3. Logs must include your name, callsign (if any) and E-mail address, a list of all equipment used for the test, the measured frequencies,

and time of each measurement.

4. You may take as many measurements as you like but only those taken during period 3 will be allowed. Only one measurement per band per run is allowed on your submitted log. If you take more than one measurement, total them up and average them out. In other words, your log may contain a maximum of 6 readings.

Results will be posted to BA and GB reflectors as soon as I can after the deadline.

E-mail broehrig@admin.aurora.edu 73 de Bob, K9EUI
CIS: Data / Telecom Aurora University, Aurora, IL
630-844-4898 Fax 630-844-5530

Date: Sun, 4 May 1997 00:02:26 -0500
From: bill@skeeter.frco.com (William Hawkins)
Subject: Fuses

Have just finished diagnosing the same problem in two very different power supplies. Both had a ground fault in a sealed choke. One was rated for 600 volts in a 300 volt supply, the other 5KV in a 750 volt supply.

Both supplies had 25 amp automobile fuses in the line fuse holder.

Now, I dunno what made the chokes fail, but I can understand how it could happen. What I can't understand is the 25 amp fuse. In both cases another, more expensive component burned out. Fortunately, it wasn't the power transformer either time.

Then there was the panadapter with a bad HV cap, and the line fuse holder had a jumper around it.

Why would anybody think it was OK to do this? Never mind, people used to put pennies behind plug fuses, too. Sort of like saying, "Is the fuse getting in the way of having what I want? Then get rid of it." But something else will act as a fuse, and it may not be replaceable.

Do you have a horror story about a fuse?

Regards,
Bill Hawkins bill@skeeter.frco.com

Date: Sun, 4 May 1997 18:44:40 -0400 (EDT)
From: rdkeys@csemail.cropsci.ncsu.edu
Subject: Re: hetrodyne reciever

> Dear Brewmeisters,
> I saw this thing in a book (I think from the Xtal Society.) The
> oscillator for the crystal radio is a spark. Tuned with a cap and
> coil and injected to make the direct conversion. The version I saw
> described, must have radiated a lot from the antenna.

> Anyone ever hear of anything like this?
> Walter
>

Yup... It was the standard continuous wave radio receiver in the Army and Navy until the end of WWI, at which time early regenerative receivers with oscillating detectors began to be used instead.

The design hails from Dr. Poulsen's arc being used around 1907-1910 as the source of local oscillations hooked up to a xtal set, primarily for the reception of continuous waves generated from his arc transmitters. I am not sure when the first practical use of it was made but it must have been around 1910-1912 or so, from what I can tell. Later, in WWI, early oscillating valves were used. If the valve was external to the xtal set, it was known as an external heterodyne receiver. If the valve or source of oscillations for which to produce a beat note was contained in the receiver proper, it was known as a heterodyne receiver, meaning ``other power'' receiver. The oscillating regen detectors were known as autodynes, or just oscillating regenerative receivers. For some reason, unknowing hams in the 60's called them direct conversion receivers, instead, and seemed to have waylaid their history books.

Typical of such receivers in WWI would have been the receivers predating the SE-143 (I think that was the ``A'', ``B'' and ``C'' series receivers). They were not greatly successful designs, but they did work, relatively well. Any tuner would work, tho. All you need is a tuner, a detector and an oscillating device which can produce the required local beats. A spark transmitter will work, but not very well, which is a function of the class B ``damped'' waves emitted by the spark set. The distortion would be tremendous, and the note a mushy mess. When tubes began to be used, the Navy stuck to special heterodyne receivers for a while longer until about 1920 or so when they used them only for special low frequency receivers where the detuning of the oscillator from the primary and secondary circuits had less effect than on a regen detector where the whole system is detuned by several hundred cycles or more to produce the beat note.

The best reference that I can recommend, with good illustrations of the schematics and operation of these early sets is the Army Training Circular No 40(?), on radio, dating from 1922, or Elmer Bucher's Practical Wireless Telegraphy, 1917 or 1921 editions.

It works well on the RAL with a BC-221 as the external heterodyne.

73/ZUT DE NA4G/Bob UP

Date: Sun, 4 May 1997 19:20:23 utc
From: wb0aaq@juno.com (FREDERICK I VAN ARTSDALEN)
Subject: Test Disregard

This is a test disregard.

End of glowbugs V1 #23

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Created by **Steve Modena, AB4EL**
Comments and suggestions to **modena@SunSITE.unc.edu**
